

appropriate fee under 37 C.F.R. §§ 1.16 to 1.21 from Williams, Morgan & Amerson, P.C. Deposit Account No. 50-0786/2000.045900. Reconsideration of the application in view of the following remarks is respectfully requested.

REMARKS

Claims 1-35 remain pending in the present application, and are presented to the Examiner for examination in light of the remarks made herein.

The Examiner made a restriction requirement under 35 U.S.C. §121 restricting claims 1-32 of the present invention (*i.e.*, the Group I claims) as being drawn to a process and claims 33-35 of the present invention (*i.e.*, the Group II claims) as being drawn to an apparatus. While traversing the grounds of the restriction requirement set forth by the Examiner, Applicants acknowledge the election of claims 1-32 (*i.e.*, the Group I claims) and the withdrawal of claims 33-35 by the Examiner as being drawn to a non-elected invention.

In the restriction requirement, the Examiner alleged that the inventions are distinct from one another since the process as claimed can be practiced by another materially different apparatus, such as "using a system without a controller." Applicants, however, respectfully disagree with the Examiner. Applicants first question how "a system without a controller," as alleged by the Examiner, could even be operational. Moreover, the Examiner has failed to specifically identify a system that would perform the functionality of the claimed controller, *i.e.*, the Examiner has failed to identify a system that compares a first depth to a desired depth, and to vary the temperature of a subsequently processed semiconducting substrate in response to the first depth being different from the desired depth. Accordingly, because the Examiner has failed to properly identify a system that compares a first depth to a desired depth, and to vary the

temperature of a subsequently processed semiconducting substrate in response to the first depth being different from the desired depth, the Examiner has failed to prove the inventions defined by the Group I and II claims are distinct, and, thus, the restriction requirement set forth by the Examiner is therefore deemed improper.

The Examiner rejected claims 1, 2, 8, 13, 18, 23, and 28 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner alleges that the limitation "varying the temperature of a subsequently processed semiconducting substrate..." in the aforementioned claims is subjective, vague, and indefinite. Applicants, however, respectfully disagree with this rejection as set forth by the Examiner. Applicants respectfully submit that "varying the temperature" of a subsequently processed semiconducting substrate is not indefinite, but rather a broader way to claim the invention, and that the Examiner should read the aforementioned limitation in light of the specification. Applicants respectfully submit that it would be unfair to have to provide more limiting/restrictive terminology in the claims when the claimed limitations should be read in light of the specification for purposes of determining whether the claim meets the requirements of 35 U.S.C. §112, second paragraph. Accordingly, for at least the reasons mentioned above, Applicants respectfully submit that the aforementioned limitations are not indefinite, and, thus, the rejection under 35 U.S.C. §112, second paragraph set forth by the Examiner should be withdrawn.

The Examiner rejected claims 1-32 under 35 U.S.C. §103(a) as being unpatentable over Bukhman et al. (U.S. Patent No. 5,795,493) in view of Bolliger (U.S. Patent No. 5,375,064). Applicants respectfully traverse this rejection provided by the Examiner.

In the rejection, the Examiner alleges that Bukhman discloses a method that includes forming a process layer above a semiconductor substrate, etching at least a portion of the process layer, measuring a thickness of the wafer, and heating a plurality of portions of the wafer to a temperature determined by a heating profile map. The Examiner acknowledges that Bukhman does not disclose comparing the first depth to a desired depth. The Examiner then relies on Bolliger to teach comparing a measured thickness profile with a predetermined or desired thickness. The Examiner then concludes that it would be obvious to modify Bukhman with the teaching of Bolliger to compare a first depth to a desired depth since it would help determine whether or not to continue the etching process. Applicants respectfully disagree with this rejection as set forth by the Examiner.

Bukhman discloses a laser assisted plasma chemical etching method to differentially heat portions of a semiconductor substrate during downstream etching by generating a heating profile map. The differential heating of the semiconductor substrate provides a differential etch rate for each portion of the substrate heated, which results in improved uniformity and reduced etch induced surface damage to the substrate.

While Bukhman may teach to measure a thickness of a substrate and to differentially heat the substrate in accordance with a generated heating profile map, Bukhman fails to teach or suggest to compare a first depth to a desired depth of a substrate and to vary the temperature of a subsequently processed semiconducting substrate in a region corresponding to a first preselected region in response to the first depth being different from the desired depth. In accordance with Bukhman, on the other hand, a thickness of the semiconductor substrate is determined at a particular location thereof, and a heating profile map is generated for the substrate to differentially heat the substrate to facilitate subsequent etching thereon. Although the Examiner

relies on Bolliger for allegedly teaching to compare a measured thickness profile to a desired thickness of a semiconductor substrate, Bolliger does not teach to vary the temperature of a subsequently processed substrate in response to the thickness profile of the substrate matching a desired profile of the substrate. Bolliger, on the other hand, teaches to accelerate or decelerate a material removal tool based on determining whether a measured thickness profile of the substrate matches a desired profile.

Bukhman and Bolliger, whether viewed as a combination or individually, fail to teach to compare a first depth of the substrate to a desired depth and to vary the temperature of a subsequently processed substrate in response to the first depth being different from the desired depth as defined by independent claims 1 and 13 of the present invention. Additionally, Bukhman and Bolliger fail to teach to compare a second depth at a second location on a substrate to the desired depth and to vary the temperature of a subsequently processed substrate in response to the second depth being different from the desired depth as defined in claim 13 of the present invention. Furthermore, Bukhman and Bolliger fail to teach to compare a first depth at a first location on a substrate to a second depth at a second location on the substrate and to vary the temperature of a subsequently processed substrate in response to the first depth being different from the second depth as defined in claim 23 of the present invention.

Accordingly, because Bukhman and Bolliger fail to teach to at least compare a first depth of the substrate to a desired depth or second depth and to vary the temperature of a subsequently processed substrate in response to the first depth being different from the desired depth or second depth, the combination of Bukhman and Bolliger cannot possibly make obvious independent claims 1, 13, and 23 of the present invention and all claims dependent thereon. Accordingly,

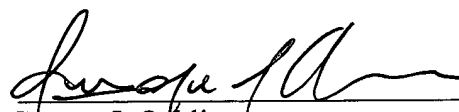
Applicant respectfully submits that claims 1-32 of the present invention are allowable over the Bukhman/Bolliger combination for at least these reasons.

Applicant respectfully submits that the remaining rejections in the present application are improper and should be withdrawn because the cited references fail to teach or suggest all of the limitations of the claims as discussed in detail above. Accordingly, in view of the remarks presented herein, a Notice of Allowance is respectfully solicited.

It is believed that no fee is due in connection with filing this paper; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason, the Assistant Commissioner is authorized to deduct said fees from Williams, Morgan & Amerson, P.C. Deposit Account No. 50-0786/2000.045900.

The Examiner is invited to contact the undersigned at (713) 934-4058 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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